Political connections, family ownership and access to bank credit

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This study investigates how firm-level political connections (PCs) play a role in their access to bank credit. We decompose the bank loan application process into the self-selection process of firms and the selection process of banks. Using 17,249 firms from 2018–2020 World Bank Enterprise surveys, we find that PCs are positively associated with the willingness of firms to apply for bank credit, the probability of credit approval, and favourable credit terms. Moreover, being a family firm raises the probability of securing credit approval by 21% and, when the firm is politically connected, the probability of obtaining secure loans without collateral is 11% greater than firms without political connections. In line with institutional theory, we argue that PCs promote efficiency by allowing private sector agents to circumvent cumbersome regulations in developing and transitional economies.

1. Introduction

This study aims to examine the net effects of political connections (PCs) by focusing on the relationship between political connections and access to bank credit. Ever since the 2008 global financial crisis, the accessibility of credit has been considered an important factor for firms operating in a bank-based financial system wherein their primary external financing is from banks (Angori, Aristei, & Gallo, 2020). Recent studies also emphasise the importance of corporate governance and ESG in access to finance through credit rating (Bradford, Chen & Zhao, 2019; Brogi, Lagasio & Porretta, 2022). A fair investigation of the determinants of bank credit allocation needs to consider both the demand and the supply aspects of the process. As a result of data limitations, the demand aspect of firm applications for credit is scant in empirical studies (Cole & Sokolyk, 2016). In this paper, using WorldBank Enterprise Survey data, we examine the role of PCs in the firm's self-selection process and the role they play in the selection process of banks.

PCs are almost everywhere (Banerji, Duygun, & Shaban, 2018), and their impact on the financial system (Jackowicz, Kowalewski & Kozłowski, 2013; Janbaz et al, 2022) and businesses have been discussed extensively for decades (Faccio, Masulis, & McConnell, 2006; Shi, 2022). The trade-off between the losses and gains that arise from PCs mainly depends on the individual country's economic, political and legal context (Banerji et al., 2018). Some studies posit that politically connected firms have a lower quality of reported earnings (Chaney, Faccio, & Parsley, 2011), poor ethics and a low level of accountability (Li & Zhang, 2010), less accurate analysts' earnings forecasts (Chen, Ding, & Kim, 2010), and high information asymmetry (Boubakri, Cosset, & Saffar, 2012), all of which reduces the firm's access to bank credit. Additionally, PCs increase uncertainty and transaction costs due to corruption and bribery (Luo, 2003), which negatively affects access to bank finance.

On the other hand, some studies report that PCs are beneficial to firms because they help to establish strong networks with society (Peng & Luo, 2000) and facilitate mutual trust, thus reducing information asymmetry problems which, in turn, boosts the likelihood of the firm obtaining bank loans (Banerji et al., 2018; Shi, 2022). It has also been argued that frequent engagement in political activities boosts the opportunities of firms to grow close relationships with party members (Li, Hermes, & Lensink, 2020). An intimate connection with the government enables firms to acquire external funds and soft budget constraints (Faccio et al., 2006). PCs are more common in less developed countries. PCs are highly correlated with political power, which is a crucial component in the financial markets of many transitional and developing economies (Faccio et al., 2006). There is an urgent need to tease out the impact of PCs on firm credit access.

Prior studies of PCs often emphasise the importance of firm ownership in the PC-firm financing nexus. Family firms exhibit a unique type of concentrated ownership controlled by a group of family members (Singal & Singal, 2011) and have the power to develop ties with local government officials (Zhu & Chung, 2014). However, family firms experience type II agency problems due to their concentrated family ownership (Fama & Jensen, 1983). Indeed, politically connected family firms can simply prioritise their family interests at the expense of minority shareholders to funnel profits to political party members through excessive party donations (Azoury, Bouri, & Governance, 2015). In fact, politically connected founding families affect firms' access to external resources and agency conflicts between controlling shareholders and external investors (Liu & Tian, 2010). As such, the moderating effect of family ownership on the relationship between PCs and access to credit warrants a close examination.

Our paper enriches the literature by providing evidence on PCs and their impact on both the supply and demand aspects of credit access, as this is currently scant in the literature. Prior studies have primarily focused on the likelihood of firms obtaining credit and the associated terms (supply aspect) due to the unavailability of data around demand aspects of credit access. Nevertheless, the importance of the demand-side for a bank loan has been an emphasis in the finance literature, with evidence suggesting that approximately half of all small firms are discouraged from applying for bank loans (Cavalluzzo, Cavalluzzo, & Wolken, 2002), and that 20%-50% of firms that do not apply for loans would have been approved (Cole & Sokolyk, 2016). Thus, we seek to add empirical evidence to the PC-access to bank financing nexus in considering both the demand and supply aspects of this relationship.

To the best of our knowledge, this is the first study to examine how family ownership moderates the relationship between PCs and access to external finance. Prior studies report that PCs may vary according to firm ownership type (Hsu, Liu, & Huang, 2012). Thus far, however, the context of family ownership has been minimally examined with respect to PCs even though family ownership is the most prevalent type of ownership in developing economies (La Porta, Lopez-de-Silanes, & Shleifer, 1999). Given the dominance of this ownership type, it is expected that the effects of PCs on access credit will differ according to the degree of family governance, specifically, family members' involvement in ownership and control. Our methodological contribution lies in our control of selection bias in credit access, which is mostly neglected in empirical studies (see Hewa Wellalage & Thrikawala, 2021). Since self-selection plays an important role in determining the allocation of bank loans in private firms (Cavalluzzo et al., 2002; Cole & Sokolyk, 2016), controlling this econometric shortfall is important to get unbiased results.

The remainder of this paper is organised as follows. Section 2 and 3 describe the data and methodology, respectively. Section 4 reports the results, and section 5 reports the robustness tests. Finally, section 6 concludes the paper.

2. Data and Sample

Data are obtained from the latest WorldBank Enterprise Surveys in 2018-2020 (https://www.enterprisesurveys.org/en/data) from Eastern Europe, Central Asian and African regions. The final sample consists of firms from 24 countries after excluding developed countries and countries with missing observations. The total firms from each country, the number of politically connected and non-connected firms, and the number of family-owned firms and non-family-owned firms are reported in Table 1.

<< Insert Table 1 here>>

Table 2 reports descriptive statistics of the variables and the *t*-statistics of the politically connected and non-connected groups. The significant *t*-statistics indicate the mean difference between the loan application, loan approval, and loan terms of politically connected and non-connected firms. Furthermore, control variables suggest the mean differences between the firm characteristics and firm ownership of politically connected and non-connected firms.

<< Insert Table 2 here>>

3. Methodology

We employed a probit model with sample selection (Heckman Probit), which assumes an underlying relationship between bank finance access and PCs. We report three models for (i) bank financing application, (ii) bank financing approval and (iii) credit term:

a. *Bank financing application*

$Probit(Loan\_Apply_{ic} = 1) = \propto_c + \left(\alpha + \beta PC_{ic} + \gamma X_{ic} + \varepsilon_{ic}\right)$ ....(1)

$Probit(Credit\_Constraints_{ic} = 1) = \propto_c + \left(\alpha + \beta PC_{ic} + \gamma X_{ic} + \partial_1 Sales\_Increase_{ic} + \varepsilon_{ic}\right)$ ...(2)

Equation 1 is the main equation of the bank finance application, and Equation 2 is the sample selection equation. Equation 1, $Loan\_Apply_{ic}$ takes the value of one if firms apply for external finance, and zero otherwise. Nevertheless, in the sample, a firm $Loan\_Apply_{ic}$ is only observable if the firm needs bank financing. Equation 2 considers the selection of firms which report that financing is needed. Following the same taxonomy as Hewa Wellalage, Locke, and Samujh (2020), we used *Credit_Constraints* $_{ic}$ variable which equals to one if the firms indicate that they have constraints in credit.

To address selection bias, we use *Sales_Increase* as a variable in the selection equation. *Sales_Increase* indicates income generation, healthy cash flow, and availability of funds for business operations, thus reducing the need for external credit.

b. *Bank financing approval*

$Probit(Loan\_Approved_{ic} = 1) = \propto_c + (\propto_i + \beta PC_{ic} + \gamma X_{ic} + \varepsilon_{it})$ ...(3)

$Probit(Loan\_Apply_{ic} = 1) = \propto_c + \left(\propto_i + \beta PC_{ic} + \gamma X_{ic} + \partial_1 Informal\_Credit_{ic} + \varepsilon_{it}\right)$ ...(4)

In Equation 3, $Loan\_Approved_{ic}$ takes the value of one if a loan application is approved by a bank and zero otherwise. In the sample firms, loan approval is only observable if the firm applies for a loan. Equation 4 considers the selection of firms which report that an application for financing is lodged. We use *Informal_Credit* as an instrument. Similar instrument variables are used by Pham and Talavera (2018).

c. *Credit term*

We consider two credit terms: (i) collateral requirements and (ii) loan term (years)

$Probit(No\_Collateral_{ic} = 1) = \propto_c + (\propto_i + \beta PC_{ic} + \gamma X_{ic} + \varepsilon_{it})$ ...(5a)

$Probit(Loan\_term_{ic} = 1) = \propto_c + (\propto_i + \beta PC_{ic} + \gamma X_{ic} + \varepsilon_{it})$ ...(5b)

$Probit(Loan_{ic} = 1) = \propto_c + (\propto_i + \gamma X_{ic} + \partial_2 Snr\_Mgr\_Time_{ic} + \varepsilon_{it})$ ...(6)

Equation 5a, $No\_Collateral_{ic}$ takes the value of one if the financial institution does not require collateral, and zero otherwise. In Equation 5b, $Loan\_term_{ic}$ takes the value of one if the loan duration is more than five years, and zero otherwise. Equation 6 is a sample selection equation. Following Hewa

Wellalage and Thrikawala (2021), this study uses senior manager time spent dealing with regulations (*Snr_Mgr_Time*) as an instrument which assumes that if a senior manager spent more time dealing with regulations, the likelihood of the firm receiving approval for external financing is higher.

The explanatory variables include all variables characterising the firm and variables characterising the firm's PCs (See Appendix Table A1 for all variables used in the regression). We use country level clusters where *vce* (cluster country) captures country level standard errors.

4. Results

4.1 PCs and access to external credit

Table 3 reports the results from the Heckman Probit estimation of the PCs and access external credit. For firms with PCs, we would expect their willingness to apply for loans to be about 51% probability. Our results above indicate that PCs increase firm confidence to apply for loans. Also, firms with PCs have a 39% greater probability of having their loans approved compared to their counterparts without PCs. This may be when the top management of firms have networks to political party members; this facilitates their access to bank loans (Dickson, 2003)

Table 3, which focuses on loan conditions, indicates that politically connected firms have a 34% probability of getting a loan without securing collateral. This may occur when a political party member allows the firm manager to develop an informal relationship with a financial institution, potentially reducing information asymmetry and increasing trust. Such relationships positively affect the financial institution’s decisions about loan approval and favourable credit terms. This aligns with the argument that bank loans, arising from informal relationships, are among the most prevalent mechanisms used by politicians to show their authority and retain their political patronage (Sapienza, 2004).

<< Insert Table 3 here>>

4.2 Do family firms benefit more from PCs?

Table 4 reports the relationship between three phases of access external credit, PCs, and family ownership, and the marginal effect estimated around the mean point. The negative and statistically significant *Political Connection* Family* indicates that every firm with family ownership will see 40% less loan application probability in politically connected firms compared to non-politically connected firms. Family-owned firms that have connections with political parties may have access to other financial sources, reducing their demand for bank loans. However, intergroup analysis indicates that for every firm with family ownership, we will see 21% more loan approvals and 11% more approvals without collateral in politically connected firms than in non-politically connected firms. Intra group analysis shows us that politically connected firms with family ownership leads to 18% (.21+-.02) more credit approval and 10% more loans approved without collateral [.11+ (-.0051)] than politically connected firms without family ownership.

Overall, our results indicate that although politically connected family firms demonstrate less probability of applying credit, once they apply, they have a high probability of obtaining loan approvals and more favourable credit terms.

<< Insert Table 4 here>>

Additional test

It is further interesting to see the impact of government ownership on PC and credit nexus. The positive and statistically significant *Political Connection* Gov_own* indicates that politically connected state-owned firms enjoy approximately 7% higher loan approval probability compared to non-politically connected firms. than their counterparts. A state-owned firm or government equity ownership will automatically establish a political association. This effect is further enhanced when firms' CEO /owners have been elected or appointed to a political position in the country. Table A.2 in the Appendix indicates that government ownership positively impacts the probability of obtaining loans.

5. Robustness

5.1 Propensity score matching model

External credit accessibility may be associated with observable and unobservable factors at the firm level (Wellalage & Fernandez, 2019). The propensity score matching (PSM) technique controls for self-selection bias and causal interferences of the PC-credit access relationship by placing them into a non-random assignment (Rosenbaum & Rubin, 1983). Using the PSM, we compare the firms exposed to no treatment $T=0$ (no PC) and firms exposed to treatment $T=1$ (PC).

Table A.3 in Appendix shows that in all matching models, the ATT is significant[1] and positive for *Loan_Apply* (3%-8%) and *Loan _Approved* (4%-8%), indicating that PC positively impacts bank credit. Further, Table A.4 reports that for all matching models for politically connected family firms, the ATT is significant and negative for *Loan_Apply* (2%) and positive for *Loan _Approved* (0.3). This reiterates our main findings that indicate family firms with PC demonstrate less probability of applying for credit; once they apply, they have a high probability of obtaining loan approvals.

5.2 Alternative proxies for PCs

[1] *t value is significant if the absolute t value is higher or equal to 1.96, meaning* $|t|\geq 1.96|t|\geq 1.96$.

Following Krammer and Jimenez (2020), we employed *manager time* (i.e., percentage of total senior management time spent on dealing with the requirements of government regulations) as an alternative proxy for PCs and rerun the baseline regression. Overall, the results from our alternative proxies' regression indicate that our main findings are not influenced by the constructions of the PC proxies[2].

6. Conclusion

This paper examines the PC effect on firm level credit access. Using the Heckman Probit model, we analyse the firm level survey dataset from 24 developing and transition economies. Our finding suggests that PCs have a positive impact on both credit demand and credit supply. In fact, firms with PCs have a greater probability of lodging loan applications, and of obtaining loan approval and loans without pledging collateral than their non politically connected firms. In addition to this, we find that family-owned firms with PCs enjoy the highest rates of loan approval and obtain the most favourable credit terms by getting bank loans with no collaterals. In saying that, we also find that family-owned firms with PCs may self-select when applying for bank loans.

Overall, using PCs strategically will increase the confidence of private firms to apply for loans and the probability of them acquiring loans with favourable terms. Although firms in weak institutional environments can reap the benefits of having PCs, it is required to strengthen legal enforceability, which decreases the negative effects of expropriation via PCs.

Notwithstanding the robustness of our results, this study is also subject to several limitations, some of which may be possible avenues for future research. In future, studies can consider different types of PCs and their impact on credit access. Also, future studies can consider different institutional settings.

References

Angori, G., Aristei, D., & Gallo, M. (2020). Banking relationships, firm-size heterogeneity and access to credit: Evidence from European firms. *Finance Research Letters, 33*. doi:https://doi.org/10.1016/j.frl.2019.07.004

Azoury, N., Bouri, E., & Governance. (2015). Principal–principal conflicts in Lebanese unlisted family firms. *Journal of Management, 19*(2), 461-493. doi:https://doi.org/10.1007/s10997-014-9287-8

Banerji, S., Duygun, M., & Shaban, M. (2018). Political connections, bailout in financial markets and firm value. *Journal of Corporate Finance, 50*, 388-401. doi:https://doi.org/10.1016/j.jcorpfin.2016.12.001

Boubakri, N., Cosset, J. C., & Saffar, W. (2012). The impact of political connections on firm's operating performance and financing decisions. *Journal of Financial Research, 35*(3), 397-423. doi: https://doi.org/10.1111/j.1475-6803.2012.01322.x

Bradford, W., Chen, C., & Zhao, Y. (2019). The effect of corporate governance on credit ratings: Evidence from China's bond market. Journal of International Financial Management and Accounting, 30(2), 113–144. https://doi.org/10.1111/jifm.12094

[2] *For* brevity, we do not report *the regression results with an alternative proxy but are available upon request.*

Brogi, M., Lagasio, V., & Porretta, P. (2022). Be good to be wise: Environmental, Social, and Governance awareness as a potential credit risk mitigation factor. Journal of International Financial Management and Accounting. https://doi.org/10.1111/jifm.12156

Cavalluzzo, K. S., Cavalluzzo, L. C., & Wolken, J. D. (2002). Competition, small business financing, and discrimination: Evidence from a new survey. *The Journal of Business, 75*(4), 641-679. doi:10.1086/341638

Chaney, P. K., Faccio, M., & Parsley, D. (2011). The quality of accounting information in politically connected firms. *Journal of Accounting & Economics, 51*(1-2), 58-76. doi:https://doi.org/10.1016/j.jacceco.2010.07.003

Chen, C. J., Ding, Y., & Kim, C. F. (2010). High-level politically connected firms, corruption, and analyst forecast accuracy around the world. *Journal of International Business Studies, 41*(9), 1505-1524. doi:https://doi.org/10.1057/jibs.2010.27

Cole, R., & Sokolyk, T. (2016). Who needs credit and who gets credit? Evidence from the surveys of small business finances. *Journal of Financial Stability, 24*, 40-60. doi:http://10.1016/j.jfs.2016.04.002

Dickson, B. J. (2003). *Red capitalists in China: The party, private entrepreneurs, and prospects for political change*: Cambridge University Press.

Faccio, M., Masulis, R. W., & McConnell, J. J. (2006). Political connections and corporate bailouts. *The Journal of Finance, 61*(6), 2597-2635. doi:https://doi.org/10.1111/j.1540-6261.2006.01000.x

Fama, E. F., & Jensen, M. C. (1983). Separation of ownership and control. *The Journal of Law and Economics, 26*(2), 301-325.

Hewa Wellalage, N., Locke, S., & Samujh, H. (2020). Firm bribery and credit access: Evidence from Indian SMEs. *Small Business Economics, 55*, 283–304. doi:https://doi.org/10.1007/s11187-019-00161-w

Hewa Wellalage, N., & Thrikawala, S. (2021). Bank credit, microfinance and female ownership: Are women more disadvantaged than men? *Finance Research Letters, Online First*. doi:https://doi.org/10.1016/j.frl.2021.101929

Hsu, C. H., Liu, Z. G., & Huang, S. S. (2012). Managerial ties in economy hotel chains in China: Comparison of different ownership types during entrepreneurial processes. *International Journal of Contemporary Hospitality Management*. doi:https://doi.org/10.1108/09596111211217923

Jackowicz, K., Kowalewski, O., & Kozłowski, Ł. (2013). The influence of political factors on commercial banks in Central European countries. *Journal of Financial Stability*, 9(4), 759-777. doi: https://doi.org/10.1016/j.jfs.2012.08.001

Janbaz, M., Hassan, M. K., Floreani, J., Dreassi, A., & Jiménez, A. (2022). Political Risk in Banks: A Review and Agenda. *Research in International Business and Finance*, 101713. doi: https://doi.org/10.1016/j.ribaf.2022.101713

Krammer, S. M., & Jimenez, A. (2020). Do political connections matter for firm innovation? Evidence from emerging markets in Central Asia and Eastern Europe. *Technological Forecasting and Social Change, 151*, 119669. doi:https://doi.org/10.1016/j.techfore.2019.05.027

La Porta, R., Lopez-de-Silanes, F., & Shleifer, A. (1999). Corporate ownership around the world. *Journal of Finance, 54*(2), 471-517.

Li, L., Hermes, N., & Lensink, R. (2020). Political connections and household access to bank loans: evidence from China. *Economic research-Ekonomska istraživanja, 33*(1), 288-309. doi:http//10.1080/1331677X.2019.1656099

Li, W., & Zhang, R. (2010). Corporate social responsibility, ownership structure, and political interference: Evidence from China. *Journal of Business Ethics, 96*(4), 631-645. doi: https://doi.org/10.1007/s10551-010-0488-z

Liu, Q., & Tian, G. (2010). *Political connections, founding family ownership and leverage decision of privately owned firms*. Paper presented at the 23rd Australasian Finance and Banking

Conference. https://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.674.9810&rep=rep1&type=pdf

Luo, Y. (2003). Industrial dynamics and managerial networking in an emerging market: The case of China. *Strategic Management Journal, 24*(13), 1315-1327. doi: https://doi.org/10.1002/smj.363

Peng, M. W., & Luo, Y. (2000). Managerial ties and firm performance in a transition economy: The nature of a micro-macro link. *Academy of Management Journal, 43*(3), 486-501. doi:https://doi.org/10.5465/1556406

Pham, T., & Talavera, O. (2018). Discrimination, social capital, and financial constraints: The case of Viet Nam. *World Development, 102*, 228-242. doi:https://doi.org/10.1016/j.worlddev.2017.10.005

Rosenbaum, P. R., & Rubin, D. B. (1983). The central role of the propensity score in observational studies for causal effects. *Biometrika, 70*(1), 41-55. doi:https://doi.org/10.1093/biomet/70.1.41

Sapienza, P. (2004). The effects of government ownership on bank lending. *Journal of Financial Economics, 72*(2), 357-384. doi:https://doi.org/10.1016/j.jfineco.2002.10.002

Shi, L. (2022). Donation, political connection and credit access: The case of Chinese small and medium enterprises. *Finance Research Letters*, 46, p.102269. doi: https://doi.org/10.1016/j.frl.2021.102269

Singal, M., & Singal, V. (2011). Concentrated ownership and firm performance: Does family control matter? *Strategic Entrepreneurship Journal, 5*(4), 373-396. doi: https://doi.org/10.1002/sej.119Citations

Wellalage, N. H., & Fernandez, V. (2019). Innovation and SME finance: Evidence from developing countries. *International Review of Financial Analysis, 66*, 1-14. doi:https://doi.org/10.1016/j.irfa.2019.06.009

Zhu, H., & Chung, C.-N. (2014). Portfolios of political ties and business group strategy in emerging economies: Evidence from Taiwan. *Administrative Science Quarterly, 59*(4), 599-638. doi:https://doi.org/10.1177/0001839214545277

Table 1: Sample

Country		Total firms	Politically connected firms	Non politically connected firms	Family-Owned firms	Non-family-own firms
Albania	Transition	377	18 (5%)	359 (95%)	161 (43%)	216 (57%)
Armenia	Transition	120	06 (5%)	113 (94%)	120 (100%)	-
Azerbaijan	Transition	225	07 (3%)	213 (95%)	135 (60%)	90 (40%)
Bosnia & Herzegovina	Transition	362	32 (9%)	329 (91%)	199 (55%)	163 (45%)
Egypt, Arab. Rep.C	Developing	3075	170 (6%)	2905 (94%)	667 (22%)	2408 (78%)
Georgia	Transition	581	29 (5%)	551 (95%)	113 (19%)	468 (81%)
Jordan	Developing	601	27 (4%)	573 (95%)	211 (35%)	390 (65%)
Kazakhstan	Transition	1409	49 (3%)	1342 (95%)	324 (23%)	1085 (77%)
Kosovo	Developing	271	14 (5%)	257 (95%)	219 (81%)	52 (19%)
Kyrgyz Republic	Transition	360	29 (8%)	329 (91%)	112 (31%)	248 (69%)
Lebanon	Developing	532	17 (3%)	515 (97%)	354 (67%)	178 (33%)
Moldova	Transition	360	29 (8%)	325 (90%)	230 (64%)	130 (36%)
Mongolia	Developing	360	40 (11%)	320 (89%)	90 (25%)	270 (75%)
Montenegro	Transition	150	16 (11%)	133 (89%)	38 (25%)	112 (75%)
Morocco	Developing	1096	84 (8%)	567 (52%)	896 (82%)	200 (18%)
Macedonia, FYR	Transition	360	10 (3%)	348 (97%)	319 (89%)	41 (11%)
Russian Federation	Transition	1323	47 (4%)	1258 (95%)	105 (8%)	1218 (92%)
Serbia	Transition	361	18 (5%)	339 (94%)	127 (35%)	234 (65%)
Tajikistan	Transition	352	30 (9%)	313 (89%)	130 (37%)	222 (63%)
Tunisia	Developing	615	128 (21%)	485 (79%)	448 (73%)	167 (27%)
Turkey	Developing	1663	73 (4%)	1587 (95%)	894 (54%)	769 (46%)
Turkish Cypriot Community	Developing	120	14 (12%)	106 (88%)	107 (89%)	13 (11%)
Ukraine	Transition	1337	153 (11%)	1166 (87%)	387 (29%)	950 (71%)
Uzbekistan	Transition	1239	65 (5%)	1163 (94%)	497 (40%)	742 (60%)
Total		**17249**	**1105** (6%)	**15596** (90%)	**6883** (40%)	**10366** (60%)

Table 2: Descriptive Statistics

Variables	Obs	Mean	Std. D	Min	Q1	Median	Q3	Max	t-test
Credit Constraints	17249	.3918	.4881	0	0	0	1	1	-0.5632
Loan_Apply	16825	.2855	.4517	0	0	0	1	1	-6.6180***
Loan_Approved	17249	.3419	.4743	0	0	0	1	1	-6.7941***
No_Collateral	17249	.9343	.2477	0	0	1	1	1	-1.0469
Loan_term	17249	.8496	.3574	0	0	1	1	1	1.6974*
Political Connection	16701	.0661	.2485	0	0	0	0	1	-
Firm size: Large	17241	.2008	.4006	0	0	0	0	1	-13.2419***
Medium	17,241	.3312	.4700	0	0	0	1	1	-0.0179
Micro & Small	17241	.4679	.4989	0	0	0	1	1	10.5770***
Legal ownership									
Company	17195	.5447	.4980	0	0	1	1	1	-5.7071***
Partnership	17195	.1987	.3990	0	0	0	0	1	2.1219**
Sole proprietor	17195	.2424	.4285	0	0	0	0	1	5.4587***
Other	17195	.0140	.1177	0	0	0	0	1	-2.7020***
Ownership type									
Foreign ownership	16945	5.000	19.7221	0	0	0	0	100	-0.9483
Government ownership	16955	.5186	5.5251	0	0	0	0	99	-6.6911***
Other ownership	16954	3.7680	17.7111	0	0	0	0	100	-0.9187
Female ownership	17093	.2351	.4241	0	0	0	0	1	-6.3457***
Firm age	16995	21.4300	14.7301	3	5	18	27	208	-11.4891***

Note: Variable definitions are provided in Appendix A.

Table 3: Heckprobit results of political connection and financing access

	Loan_Apply (I)		*Loan_Approved* (II)		*No_Collateral* (III)		*Loan_term* (IV)	
	Probit	Marginal	Probit	Marginal	Probit	Marginal	Probit	Marginal
Political Connection	2.789** (1.309)	**.5092** (.2248)**	1.219* (.6756)	**.3884** (.2143)**	2.149*** (.7367)	**.3381* (.2013)**	-.2610 (.5315)	-.0687 (.1357)
Family	.0376 (.0889)	.0068 (.0161)	.1296*** (.1296)	.0413*** (.0100)	-.0295 (.0700)	-.0046 (.0106)	-.0115 (.0677)	-.0029 (.0179)
Large	.2662*** (.0436)	.0486*** (.0097)	.2544*** (.0383)	.0810*** (.0155)	-.0291 (.0946)	-.0045 (.0144)	-.0246 (.0649)	-.0064 (.0169)
Medium	.1093** (.0486)	.0199** (.0093)	.1216*** (.0392)	.0387*** (.0129)	-.0356 (.0736)	-.0056 (.0112)	-.0536 (.0338)	-.0141 (.0090)
Company	.2034*** (.0742)	.0371** (.0170)	.3964*** (.0806)	.1263*** (.0204)	-.7527*** (.1305)	-.1184*** (.0362)	.1486 (.1154)	.0391 (.0308)
Partnership	.1710 (.1737)	.0312 (.0350)	.6301*** (.1013)	.2007*** (.0256)	-.8337*** (.1504)	-.1311*** (.0424)	.0074 (.1302)	.0019 (.0343)
Sole Proprietorship	.0363 (.1613)	.0066 (.0301)	.6218** (.1150)	.1981*** (.0286)	-.8593*** (.1134)	-.1351*** (.0457)	.0260 (.1088)	.0068 (.0288)
Foreign ownership %	-.0015** (.0006)	-.0002** (.0001)	-.0017*** (.0006)	-.0005*** (.0002)	.0009 (.0016)	.0001 (.0002)	.0011 (.0011)	.0003 (.0003)
Government ownership%	-.0005 (.0015)	-.0001 (.0003)	.0046* (.0026)	.0014** (.0008)	.0045 (.0067)	.0007 (.0011)	.0024 (.0030)	.0006 (.0008)
Other ownership %	-.0036** (.0013)	-.0006*** (.0002)	.0002 (.0009)	.0001 (.0003)	-.0005 (.0015)	-.0001 (.0002)	.0015 (.0010)	.0004 (.0003)
Female ownership	.1096 (.0829)	.0200 (.0142)	-.0805 (.0494)	-.0256* (.0153)	-.0454 (.0665)	-.0071 (.0106)	-.0348 (.0627)	-.0091 (.0158)
Manager Exp	-.0008 (.0013)	-.0001 (.0002)	.0001 (.0003)	9.48e-06 (.0001)	-.0011* (.0005)	-.0002* (.0001)	.0010 (.0019)	.0003 (.0005)
Firm age	.0004 (.0012)	.0001 (.0002)	.0016 (.0012)	.0005 (.0004)	-.0006 (.0025)	-.0001 (0004)	-.0002 (.0017)	-.0000 (.0005)
Cons	- 1.689*** (.1025)	-	-.0560 (.0706)	-	2.072*** (.3084)	-	.8457*** (.2141)	
Selection Equation Requirements								
	Credit Need		*Apply*		*Approved*		*Approved*	

Sales_Increase	-.0517** (.0252)							
Informal_Credit			.2595*** (.0708)					
Snr_Mgr_Time					.6922*** (.1178)		.6921*** (.1178)	
**Control variables*	Yes		Yes		Yes			
Cons	.0216 (.0658)		.0925** (.0387)		-1.233*** (.1845)		-1.233*** (.0808)	
/athrho (Transformed version of rho)	4.209** (1.798)		-2.587*** (.3191)		-.0284 (.1845)		-.0207 (.1070)	
Wald test Prob > chi2	5.48**		65.70***		21.00*		.0400	
Observations	16,166							

Note: *This table reports heckprobit results and marginal effects estimated around means points. In all regressions, industry dummies are included. Variable definitions are provided in Appendix A. * Selection equation has included all the control variables as in the main equation. * Significant at 10% level, **Significant at 5% level, ***Significant at 1% level. Standard errors at the country * firm level are parentheses.*

Table 4: Heckprobit results of political connection, family ownership and financing access

	Loan_Apply (I)		*Loan_Approved* (II)		*No_Collateral* (III)		*Loan_term* (IV)	
	Probit	Marginal	Probit	Marginal	Probit	Marginal	Probit	Marginal
Political Connection	2.778*** (.4989)	.5208*** (.1240)	.0209 (.0494)	.0066 (.0155)	3.864*** (1.124)	1.424** (.6773)	-.1846 (.5964)	-.0502 (.1572)
Family	.2116*** (.0497)	.0396*** (.0109)	.0774 (.0514)	-.0244 (.0162)	-.0140 (.0585)	-.0051 (.0214)	-.0234 (.0751)	-.0063 (.0206)
Political Connection Family*	-2.178*** (.5229)	**-.4083*** (.1170)**	.6533* (.7493)	**.2065* (.2367)**	.2939** (.1415)	**.1083*** (.0411)**	.0734 (.0860)	.0199 (.0235)
Large	.3080*** (.0619)	.0577*** (.0148)	.2686*** (.0398)	.0849*** (.0159)	.2177 (.1378)	.0802 (.0664)	-.0211 (.0645)	-.0057 (.0172)
Medium	.1210*** (.0376)	.0226*** (.0079)	.1376*** (.0410)	.0435*** (.0136)	.0729 (.1017)	.0268 (.0421)	-.0645* (.0356)	-.0175* (.0101)
Company	.2347* (.1259)	.0440* (.0247)	.3930*** (.0757)	.1242*** (.0190)	-.5132** (.2488)	-.1891*** (.0660)	.1628 (.1181)	.0442 (.0333)
Partnership	.2219 (.1419)	.0416 (.0281)	.6425*** (.0979)	.2031*** (.0244)	-.5259* (.3171)	-.1938** (.0901)	.0251 (.1343)	.0068 (.0367)
Sole Proprietorship	.0806 (.1348)	.0151 (.0257)	.6515*** (.1125)	.2059*** (.0274)	-.6259** (.2664)	-.2306*** (.0723)	.0312 (.1108)	.0084 (.0303)

Foreign ownership %	-.0017** (.0008)	-.0003** (.0001)	-.0018*** (.0006)	-.0006*** (.0002)	-.0014 (.0017)	-.0005 (.0007)	.0008 (.0011)	.0002 (.0003)
Government ownership%	-.0001 (.0029)	-.0000 (.0005)	.0046* (.0027)	.0014* (.0009)	.0057 (.0061)	.0021 (.0024)	.0020 (.0029)	.0005 (.0007)
Other ownership %	-.0036*** (.0009)	-.0007*** (.0002)	.0003 (.0010)	.000 (.0003)	-.0015 (.0014)	-.0005 (.0005)	.0018 (.0011)	.0004 (.0003)
Female ownership	.1137*** (.0324)	.0213*** (.0060)	-.0844* (.0481)	-.0266* (.0148)	-.0028 (.0860)	-.0010 (.0316)	-.0361 (.0643)	-.0098 (.0165)
Manager Exp	-.0011 (.0012)	-.0002 (.0002)	.0000 (.0004)	.0000 (.0001)	-.0008 (.0006)	-.0002 (.0002)	.0012 (.0022)	.0034 (.0006)
Firm age	.0005 (.0011)	.0001 (.0002)	.0015 (.0012)	.0005 (.0004)	-.0006 (.0023)	-.0002 (.0008)	-.0004 (.0017)	-.0001 (.0004)
Cons	-1.724*** (.1324)	-	.0309 (.0388)	-	.6463 (.8850)	-	.8002*** (.2609)	-
Selection Equation Requirements								
	Credit Need		*Apply*		*Approved*		*Approved*	
Sales_Increase	-.0546*** (.0194)							
Informal_Credit			.2487*** (.0779)					
Snr_Mgr_Time					.0032** (.0016)		.6510*** (.118)	
**Control variables*	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cons	.1289 (.0864)		.0825** (.0356)		-1.2265*** (.0916)		-1.242*** (.0798)	
/athrho (Transformed version of rho)	1.215** (.5312)		-2.839*** (.5958)		2.711* (.4798)		.0099* (.1394)	
Wald test Prob > chi2	3.77*		22.71***		22.0**		.0100	
Observations	16166		15,885		9850		9850	

Note: *This table reports heckprobit results and marginal effects estimated around means points. In all regressions, industry dummies are included. Variable definitions are provided in Appendix A. * Selection equation has included all the control variables as in the main equation. * Significant at 10% level, **Significant at 5% level, ***Significant at 1% level. Standard errors at the country * firm level are parentheses.*